

09/917,199

Amendments To The Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Presently amended) A composition for forming a thermally conductive polymeric material, comprising:
 - a least one thermoplastic polymeric material;
 - a thermally conductive filler material; and
 - at least one solvent in which the at least one thermoplastic polymeric material is at least partially soluble,
wherein the thermally conductive filler material added to the composition is a carbon fiber and wherein the length of the carbon fiber in the formed thermally conductive polymeric material is substantially the same as the length of the carbon fiber prior to adding the carbon fiber to the composition.
2. (Cancel) The composition of claim 1, wherein the filler material is a fiber.
3. (Original) The composition of claim 2, wherein the fiber is a carbon fiber.
4. (Original) The composition of claim 1, wherein the composition includes at least 55 wt% of the filler material.
5. (Original) The composition of claim 1, wherein the composition includes at least 60 wt% of the filler material.
6. (Original) The composition of claim 1, wherein the composition includes at least 70 wt% of the filler material.
7. (Original) The composition of claim 1, wherein the composition further comprises a second thermally conductive filler material.

8. (Original) The composition of claim 7, wherein the second filler material is selected from boron nitride particles, Teflon fibers, Teflon particles and aluminum flakes.
9. (Presently amended) A thermally conductive polymeric material, comprising:
at least one polymeric material; and
at least 55 wt% of a thermally conductive filler material [[; and]]
10. (Original) The thermally conductive polymeric material of claim 9, wherein the thermally conductive filler material is a fiber.
11. (Original) The thermally conductive polymeric material of claim 10, wherein the fiber is a carbon fiber.
12. (Original) The thermally conductive polymeric material of claim 11, wherein the fiber length is at least about 200 μm .
13. (Original) The thermally conductive polymeric material of claim 9, further comprising a second filler material.
14. (Original) The thermally conductive polymeric material of claim 13, wherein the second filler material is selected from boron nitride particles, Teflon fibers, Teflon particles and aluminum flakes.
15. (Original) The thermally conductive polymeric material of claim 9, comprising at least 60 wt% of the filler material.
16. (Original) The thermally conductive polymeric material of claim 10, comprising at least 70 wt% of the filler material.
17. (Presently amended) A method for forming a thermally conductive polymeric material, the method comprising the steps of:

forming a solution by at least partially dissolving a thermoplastic polymeric material in a solvent;
adding a thermally conductive filler material to the solution; and
removing the solvent from the solution, wherein the thermally conductive filler is a fiber and wherein the length of the fiber in the thermally conductive polymeric material is substantially the same as the length of the fiber prior to addition to the solution.

18. (Cancel) The method of claim 17, wherein the filler material is a fiber.
19. (Original) The method of claim 18, wherein the fiber is a carbon fiber.
20. (Cancel) The method of claim 18, wherein the length of the fiber before forming the solution is substantially the same as after removing the solvent from the solution.
21. (Original) The method of claim 17, wherein the filler material is added in an amount of at least about 55 wt%.
22. (Original) The method of claim 17, wherein the filler material is added in an amount of at least about 60 wt%.
23. (Original) The method of claim 17, wherein the filler material is added in an amount of at least about 70 wt%.
24. (Original) The method of claim 17, further comprising the step of adding a second thermally conductive filler material to the solution.
25. (Original) A solvent blending method for forming a thermally conductive polymeric material by blending a thermally conductive fibrous filler with a polymeric material, wherein the length of the thermally conductive fibrous filler after blending is substantially the same as the length of the thermally conductive fibrous filler after forming the thermally conductive polymeric material.

26. (Presently amended) A method for minimizing fiber breakage when forming a thermally conductive polymeric material comprising:

forming a solution by at least partially dissolving a polymeric material in a solvent;

adding a thermally conductive filler material to the solution, the thermally conductive filler material comprising fibers; and

removing the solvent from the solution, wherein breakage of the fibers is minimized.

27. (New) The composition of claim 3, wherein the carbon fiber is a graphitized pitch-based carbon fiber.

28. (New) The composition of claim 27, wherein the carbon fiber is selected from graphitized pitch-based carbon fibers having a relatively high concentration of graphite crystals which are oriented axially in the fibers.

29. (New) The composition of claim 27, wherein the carbon fiber has a tensile strength of greater than about 450 KSI, a tensile modulus of greater than about 130 MSI, a density of about 2.2 gm/cm³, a T_c of about 540 W/M °K, and an average diameter of about 7 microns.

30. (New) The composition of claim 29, wherein the carbon fiber has an average length of about 300 μm.

31. (New) The composition of claim 29, wherein the carbon fiber has an average length of about 6000 μm.

32. (New) The composition of claim 27, wherein the carbon fiber has a tensile strength of greater than about 200 KSI, a tensile modulus ranging from about 100 to about 135 MSI, a density ranging from about 2.15 to about 2.25 gm/cm³ and a The diameter of about 10 microns.

33. (New) The composition of claim 27, wherein the carbon fiber has a tensile strength of greater than about 350 KSI, a tensile modulus ranging from about 130 to about 145 MSI, a density ranging from about 2.15 to about 2.25 gm/cm³, an average diameter of about 10 μ m and an average length of about 200 μ m.